

Killed by Oil Tank Explosion

In late 2008, a welder was killed while welding components of a catwalk located above a waste oil storage tank. The welding activity ignited oil vapors in the tank, resulting in an explosion which tore the tank along its bottom seam and shot the tank up in the air, instantly releasing its 9,000 gallons of waste oil in an explosive fireball. The welder was also thrown an approximate distance of 100 feet, landing on the bedrail of a parked pickup truck. He was pronounced dead at the scene. Three other workers were also injured in the explosion. The welder and the injured workers were all subcontracted employees working on separate jobs at the facility.

The investigation found that no atmospheric testing, hot work permit or job hazard analysis was done for the catwalk work. It was also found that there was an overall lack of communication between the plant's owner and the subcontractor companies working at the plant. The owner's safety and health program contained no policies and procedures for subcontractors that work at their facility.

Furthermore, the owner would often give subcontractors unscheduled projects without generating the necessary documentation or doing any additional hazard analysis. The catwalk work was one such unscheduled project. The subcontractor assumed the owner had done the necessary atmospheric testing and hazard analysis before ordering the work. The welder therefore probably had no idea that he was welding almost directly above an uncovered atmospheric vent pipe which also had no provisions to protect vapor emissions from heat or sparks.



Citations were issued in the amount of \$5,000.

Recommendations:

1. Employers that have subcontractors working at their facilities should have a written policy addressing subcontractors visiting or working at their facility with specific reference to safety and health procedures subcontractors will be expected to follow.
2. When subcontractors are employed, the employer's written policy should state who is responsible for conducting any job hazard analysis, safety surveys, hazardous substance testing, and any necessary work permits.
3. When the employer conducts any surveys or testing, results should be documented, and a copy given to the subcontractor. When the subcontractor conducts their own testing or creates their own work permits, a copy should be given to the employer.
4. Any additions, modifications, substitutions given to a subcontractor's original project should be provided to the subcontractor in writing. The documentation should include the scope of the project, expected start and end dates, and a new job hazard analysis. If the employer does not provide the changes in writing, the subcontractor should not proceed with the work until documentation is received.